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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,624	01/20/2004	Robert Elliott Robotham	1400.1374080	8250

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EXAMINER
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SAM, PHIRIN

ART UNIT	PAPER NUMBER
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2419

MAIL DATE	DELIVERY MODE
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09/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/760,624	ROBOTHAM, ROBERT ELLIOTT	
	<b>Examiner</b>	<b>Art Unit</b>	
	PHIRIN SAM	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/20/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. Claims 1-7 and 9-15 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled “Clarification of ‘Processes’ under 35 U.S.C. 101”). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 7,280,542 to Hassan-Ali et al. (hereinafter "Hassan-Ali").

**Regarding claim 1**, Hasan-Ali discloses a method for multicasting data comprising:

- (a) adding the data to a queue (see Fig. 3, col. 8, lines 25-26);
- (b) placing a reference to the data and to a multicast tree into a to-do list (see Fig. 3, elements

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334 and 336, col. 8, lines 26-36);

(c) for each of the leaves of the multicast tree, obtaining a data element pointer and a leaf to be processed pointer from the to-do list (see Fig. 3, col. 8, lines 36-43);

(d) scheduling the data to be output to each of the leaves of the multicast tree based on the data element pointer and the leaf to be processed pointer (see Fig. 3, element 310, col. 10, lines 37-43).

**Regarding claim 2**, Hasan-Ali discloses updating the leaf to be processed pointer in the to-do list for each instance of scheduling the data to be output to each of the leaves (see Fig. 3, col. 10, lines 62-67, and col. 11, lines 1-14).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,280,542 to Hassan-Ali et al. (hereinafter "Hassan-Ali") in view of US Patent 7,007,071 to Brown (hereinafter "Brown").

**Regarding claim 3**, Hassan-Ali discloses setting a copy count to an initial value (see Fig. 3, col. 10, lines 26-28);

On the other hand, Hassan-Ali does not disclose adjusting the copy count based on a number of actual copies made. However, Brown discloses adjusting the copy count based on a number of actual copies made (see Fig. 6, col. 8, lines 51-58). At the time of the invention, it

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would have been obvious to a person of ordinary skill in the art to combine adjusting the copy count based on a number of actual copies made teaching by Brown with Hassan-Ali. The motivation for doing so would have been to provide to reduce or prevent the congestion and packets drop out read on column1, lines 27-29. Therefore, it would have been obvious to combine Brown and Hassan-Ali to obtain the invention as specified in the claim 3.

**Regarding claim 4**, Hassan-Ali discloses setting the copy count to the initial value further comprises setting the copy count to a maximum value initially (see Fig. 3, col. 10, lines 26-28);

On the other hand, Hassan-Ali does not disclose wherein the step of adjusting the copy count further comprises decrementing the copy count for each of the actual copies made. However, Brown discloses wherein the step of adjusting the copy count further comprises decrementing the copy count for each of the actual copies made (see Fig. 6, col. 8, lines 51-58). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine decrementing the copy count for each of the actual copies made teaching by Brown with Hassan-Ali. The motivation for doing so would have been to provide to reduce or prevent the congestion and packets drop out read on column1, lines 27-29. Therefore, it would have been obvious to combine Brown and Hassan-Ali to obtain the invention as specified in the claim 4.

**Regarding claim 5**, Hassan-Ali discloses the step of adjusting the copy count is performed in response to the step of scheduling the data to be output to each of the leaves of the multicast tree (see Fig. 3, col. 10, lines 62-67, col. 11, lines 1-14).

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**Regarding claim 6**, Hassan-Ali discloses the step of scheduling the data to be output to each of the leaves of the multicast tree further comprises: counting every one of the leaves of the multicast tree (see Fig. 3, element 310, col. 10, lines 37-43, 62-67, and col. 11, lines 1-14).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) US Patent 7,454,484 to He discloses method and apparatus for producing a multicast tree.

(2) US Patent 7,249,149 to Eatherton et al. discloses tree bitmap data structures and their use in performing lookup operations.

(3) US Patent 6,850,522 to Hasegawa et al. discloses packet buffer device and packet switching device.

(4) US 2004/0008716 of Stiliadis discloses multicast scheduling and replication in switches.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHIRIN SAM whose telephone number is (571)272-3082. The examiner can normally be reached on Increased Flexitime Policy (IFP) Program.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on (571) 272 - 3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Respectfully submitted,

Date: August 31, 2009

By:           /Phirin Sam/            
Phirin Sam  
Primary Examiner  
Art Unit 2419